

REMARKS

Further to the Advisory Action dated 5 February 2003, this Preliminary Amendment is being filed concurrently with a Request for Continued Examination. It is respectfully submitted that this Preliminary Amendment satisfies the requirements of 37 C.F.R. § 1.114(c).

New claims 25 and 26 have been added. Claims 7-16 and 21-26 are currently pending in the application, and are respectfully submitted for reconsideration by the Examiner in view of the following remarks.

Claims 21-24 and 11-13 were rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 5,649,687 to Rosas et al. (Rosas) in view of U.S. Patent No. 4,362,185 to Kadner. And claims 7-10 and 14-16 were rejected under 35 U.S.C. § 103 as being unpatentable over Rosas in view of Kadner, and further in view of U.S. Patent No. 4,002,318 to Koch. These rejections are respectfully traversed in view of the following comments.

Claim 21 recites a combination of features including “a pin having a first portion at least partially surrounded by the bobbin and adjacent a second portion, a valve seat including an aperture sized to receive the second portion of the pin so as to occlude the aperture, the first portion having a cross-sectional area greater than a cross-sectional area of the second portion, the pin displaceable with respect to the bobbin when an electric current flows through the wire.” It is respectfully submitted that these features are supported by the originally filed specification and drawings. For example, with reference to the originally filed specification at page 3, lines 22-23, claim 14, and Figure 5, Applicant’s pin 5 includes a first portion, e.g., whose displacement is guided by lower bearing 20, and an adjacent second portion, e.g., coupled to the first portion by a shoulder against which seal 16 is positioned. The relative sizes of the second portion and the aperture in the seat 13 are such that, when the second portion is received in the aperture, the second portion occludes the aperture. And the first portion has a cross-sectional area that is relatively greater than the cross-sectional area of the second portion. It is respectfully submitted that the invention as a whole, as recited in independent claim 21, is not taught or suggested by Rosas and Kadner, whether considered individually or in combination.

Rosas states at column 3, lines 45-57, that an armature 60 has a cylindrical body 62 and a concentric nib 64. The nib 64 carries a valve head 16, which is held in place on the nib 64 by a

circular rib of the valve head 16 engaging a circular groove in the nib 64. According to Rosas, “[t]he diameter of the nib 64 is substantially less than [sic] the inner diameter of the annular valve seat 22 so that the annular valve seat 22 is engaged by a flexible portion of the valve head 16” (column 3, lines 51-54). As such, the arrangement of Rosas “provides a good seal when the valve head 16 is closed because the valve head 16 flexes and adjusts for any misalignments or irregularities in the valve seat 22” (column 3, lines 54-57).

Thus, in contrast to Applicant’s invention, Rosas does not show, for example, that the relative sizes of the nib 64 and the aperture in the annular valve seat 22 are such that, when the nib 64 is received in the aperture, the nib 64 occludes the aperture. In fact, it appears that Rosas’s nib 64 is never received in the aperture in the annular valve seat 22, much less occludes the aperture in the annular valve seat 22.

Kadner is cited in the Office Action as allegedly suggesting a reciprocating valve member 3 with an O-ring retainer member 15 of reduced cross-section that occludes a seat 12. Moreover, the Office Action alleges that it would have been obvious for one of ordinary skill in the art to have used such an O-ring retainer member 15 as taught by Kadner in the Rosas valve. These allegations are respectfully traversed, and it is respectfully submitted that Kadner suffers from the same deficiencies as Rosas.

Kadner shows a valve in which “a mechanical as well as an elastomeric seal are formed” (column 3, lines 15-16). Specifically, Kadner’s valve member 3 “has a disc-like surface 14 which co-operates with the seat 11 to form a mechanical seal” (column 3, lines 3-5), and an O-ring 13 that engages a seat 12 to form an elastomeric seal (column 3, lines 10-15). However, like Rosas, Kadner fails to teach or suggest a valve seat including an aperture sized to receive a portion of a pin so as to occlude the aperture, as recited in Applicant’s independent claim 21. In fact, Kadner’s Figures 1 and 2 clearly show that there is a gap between O-ring retainer member 15 and the seat 12.

Therefore, for at least these reasons, it is respectfully submitted that neither Rosas nor Kadner, whether considered individually or in combination, teach or suggest the claimed invention as a whole, and it is respectfully requested that independent claim 21 be allowed.

The Advisory Action asserts that “[a]pplicant argues that the claim language ‘occlude the aperture’ distinguishes over Kadner. However, this language was added by amendment and there

is little guidance in the original specification as to what its scope and meaning is,” and that “[t]here is no disclosure that the second portion of the pin seals, or even contacts, the inner surface of the aperture.” The Advisory Action then asserts that “[t]herefore, it is reasonable to say that the portion 15 of Kadner ‘occludes’ the valve seat aperture.” These assertions are respectfully traversed in view of the following comments regarding 1) the prosecution history, and 2) Applicant’s disclosure as originally filed as compared to Kadner.

With regard to the prosecution history, the description of the relationship between the pin 5 and the valve seat 13 was added by the Amendment and Request for Reconsideration under 37 C.F.R. §1.111 filed 7 November 2001, and Applicant’s Figure 5 as originally filed was cited as providing support for the added description. Subsequently, the final Office Action issued 31 December 2001 rejected the pending claims under 35 U.S.C. § 112, first paragraph, alleging that there was no description of a portion of the pin 5 sealing the aperture of the valve seat. In the Amendment and Request for Reconsideration under 37 C.F.R. §1.116 filed 1 April 2002, Applicant amended the description, changing “permit and prohibit flow through” to “occlude,” and traversed the rejection under 35 U.S.C. § 112, first paragraph, again citing at least Applicant’s originally filed Figure 5 as supporting the added description. Following an Advisory Action issued 9 April 2002 and a Request for Continued Examination filed 25 April 2002, an Office Action was issued 7 May 2002. That Office Action did not include any rejections under 35 U.S.C. § 112, thus indicating that those rejections had been overcome. Similarly, the final Office Action issued 21 October 2002 (following Applicant’s Amendment and Request for Reconsideration under 37 C.F.R. §1.111, filed 7 August 2002) also did not include any rejections under 35 U.S.C. § 112. It is respectfully submitted that the Advisory Action issued 5 February 2003 improperly reasserts an issue that has been extensively developed and previously overcome.

Additionally, it is noted that the Advisory Action issued 5 February 2003 fails to include a single statement rebutting Applicant’s explanation of the non-applicability of Rosas to the pending claims.

With regard to Applicant’s disclosure as originally filed as compared to Kadner, M.P.E.P. § 608 states that “Applicant may rely for disclosure upon the specification with original claims and drawings, as filed.” As such, it is respectfully submitted that Applicant’s Figure 5 as

originally filed discloses and is consistent with the added description that a second portion of the pin 5 may occlude the aperture of the valve seat 13. In stark contrast, as discussed above, Kadner's Figures 1 and 2 clearly show that there is a gap between O-ring retainer member 15 and the seat 12. Thus, Kadner shows explicitly that O-ring retainer member 15 does not occlude the seat 12, thereby directly contradicting the assertion that "[t]herefore, it is reasonable to say that the portion 15 of Kadner 'occludes' the valve seat aperture."

Claims 21-24 and 11-13 depend, either directly or indirectly from claim 21, and are also respectfully submitted to be allowable for at least the same reasons as claim 21 and for the additionally recited features that further distinguish over the applied prior art. Thus, allowance of these dependent claims is respectfully requested.

The Office Action apparently relies on Koch to suggest a pin calibration feature that the Office Action acknowledges is absent from Rosas and Kadner. However, it is noted that Koch also fails to overcome the deficiencies of Rosas and Kadner with respect to claim 21. Thus, claims 7-10 and 14-16, which depend either directly or indirectly from independent claim 21, and are also respectfully submitted to be allowable for at least the same reasons as claim 21 and for the additionally recited features that further distinguish over the applied prior art. Thus, allowance of these dependent claims is also respectfully requested.

Newly added claim 25 recites a combination of features including "a body including a portion surrounding the overmolded cap, the body including first and second flow tubes" and "a valve seat being supported by the body, the valve seat including an aperture sized to receive the second portion of the pin so as to occlude the aperture and thereby prevent fluid flow between the first and second flow tubes." As discussed in Applicant's specification as originally filed at page 4, lines 8-13, "[s]ince the coil is encapsulated as part of the cap 1 and the calibration feature is also contained in the cap 1, the valve seat 13 and pin 5 position can be established with reference to a feature of the overmolded coil, [and] the calibration feature is not influenced by changes in material dimensions, e.g., changes in length due to creep or humidity."

In direct contradiction, Rosas shows a valve body 12 having an annular wall 34 surrounded by, rather than surrounding, a housing 30 that is "generally cup shaped" (column 2, line 66, to column 3, line 3). Moreover, it is respectfully submitted that neither Kadner nor Koch overcome the deficiencies of Rosas.

Thus, claim 15 is respectfully submitted to be allowable over the prior art currently applied to the other pending claims. New claim 26 depends from claim 25, and is also respectfully submitted to be allowable for at least the same reasons as claim 25, as well as for the additionally recited features that further distinguish over the applied prior art. Thus, allowance of claim 26 is also respectfully requested.

Applicants respectfully request reconsideration of the application and timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of this reply, the Examiner is invited to contact Applicants' undersigned representative to expedite prosecution of the application.

EXCEPT for issue fees payable under 37 C.F.R. § 1.18, the Commissioner is hereby authorized by this paper to charge any additional fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account 50-0310. **This paragraph is intended to be a CONSTRUCTIVE PETITION FOR EXTENSION OF TIME in accordance with 37 C.F.R. § 1.136(a)(3).**

Respectfully submitted,
MORGAN, LEWIS & BOCKIUS LLP

Date: 21 February 2003

By: 

Scott J. Anchell
Reg. No. 35,035

Customer No.: 009629
MORGAN, LEWIS & BOCKIUS LLP
1111 Pennsylvania Avenue, N.W.
Washington, D.C. 20004
Tel. 202.739.3000
Fax. 202.739.3001